

DERWENT-ACC-NO: 1989-223232

DERWENT-WEEK: 199648

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TITLE: Coloured titanium oxide coated mica material - comprises mica core, dark titanium oxide base layer, titanium dioxide interlayer, oxide(s) colour-controlling layer and silicone coating

PATENT-ASSIGNEE: SHISEIDO CO LTD[SHIS]

PRIORITY-DATA: 1987JP-0216438 (September 1, 1987), 1987JP-0295979 (November 26, 1987)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2548247 B2	October 30, 1996	N/A	016	C09C 001/42
JP 01158077 A	June 21, 1989	N/A	020	N/A

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
JP 2548247B2	N/A	1987JP-0295979	November 26, 1987
JP 2548247B2	Previous Publ.	JP 1158077	N/A
JP01158077A	N/A	1987JP-0295979	November 26, 1987

INT-CL (IPC): C09C001/36; C09C001/42; C09C003/06

ABSTRACTED-PUB-NO: JP01158077A

BASIC-ABSTRACT: Coloured titanium oxide coated mica material comprises (A) mica cores, (B) a dark-coloured titanium oxide base layer coated on (A), (C) pref. a titanium dioxide interlayer, (D) a colour tone control layer consisting of at least one oxide of Si, Al and/or Zn, or a composite oxide of at least two of Si, Al and Zn, and (E) pref. a top silicone polymer layer.

USE/ADVANTAGE - The coloured titanium oxide coated mica material is used as stable pigment or coloured pearl gloss pigment for coatings, inks, plastics, cosmetics, ceramics, textile or leather materials. Pigments have high gloss, chroma, UV light durability and chemical stability (to acids and alkalis) and the wider range of colour due to control of the thickness of (D).

In an example, 50 g. of mica powder was dispersed in 500 ml. of deionised water. Then 312.5 ml. of 40 wt.% TiOSO<sub>4</sub> aq. soln. was added under mixing into this dispersion and boiled for 3 hrs. 100 g. of TiO<sub>2</sub> coated mica was obtd. by cooling, filtering, water-washing and drying the resultant ppt. at 200 deg. C. The obtd. TiO<sub>2</sub> coated mica and 3.5 g. of metallic Ti powder were mixed and heated for 6 hrs. at 900 deg. C in vacuum. The resultant powder (I) showed green pearl gloss in appearance and interference colour. 100 g. of (I) was dispersed in 500 ml. deionised water, heated under stirring to 90 deg. C and 150 ml. of 10 wt.% Na<sub>4</sub>SiO<sub>4</sub> aq. soln. was added at 90 deg. C, keeping the soln. at pH 9 with a suitable amt. of 1 N HCl aq. soln. The soln. was then mixed for a further 1 hr. 105 g. of the prod. was obtd. by cooling, filtering,

water-washing and drying at 200 deg.C. This prod. showed brilliant yellowish green pearl gloss in appearance and interference colour. This prod. contained 41.6 wt.% mica, 41.6 wt.% TiO<sub>2</sub>, 9.2 wt.% lower Ti oxide and 7.6 wt.% SiO<sub>2</sub> and had good stability to UV Light (500-1000 hrs.), heat (200-400 deg.C) and acid and alkali.

CHOSEN-DRAWING: Dwg.0/0

DERWENT-CLASS: A60 D21 G01 G02 L02

CPI-CODES: A06-A00E2; A08-E02; A12-W07E; A12-W11H; D07-B; D08-B; G01-A08; L02-G04; L02-G05;

DID:

JP 01158077 A